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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,068	10/23/2003	Abbas Razavi	COS-837 CIP	7292

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EXAMINER

PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/692,068

Applicant(s)

RAZAVI ET AL.

Examiner

J. Pasterczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/23/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to a chemical compound, classified in class 556, subclass various depending on the particular metal and heteroatom in the compound.
 - II. Claims 13-19, drawn to a catalyst and method of making it, classified in class 502, subclass 103 inter alia.
 - III. Claim 20, drawn to an olefin polymerization process, classified in class 526, subclass various depending on the particulars of the cocatalyst, heteroatom, and monomer used.
2. The inventions are distinct, each from the other because:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a pigment for a UV-visible light filter, and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different

functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different functions, the former to be a pigment for a UV-visible light filter, the latter to form a structural material.

Inventions II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different invention, such as a Ziegler-Natta catalyst.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Gene Tyler, Esq., on 6/16/04, a provisional election was made with traverse to prosecute the invention of group II, claims 13-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-12 and 20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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5. The abstract of the disclosure is objected to because it is far too sparse to aid one in searching should this case be allowed; the structure of the bridged compound can easily be added to the abstract with the latter still fitting within the prescribed space. Correction is required. See MPEP § 608.01(b).

6. Claims 13-19 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the metals being certain 3d late transition metals, does not reasonably provide enablement for every transition or lanthanide metal. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The metals of the noted claims may be essentially anything under the sun. However, due to limitations placed on the compounds by the 18 electron rule, as well as other well-known differences between the chemistry of early vs. late transition metals (e.g. electron poor early metals being better pi electron acceptors vs. electron rich later metals being better pi electron donors), not to mention lanthanides, the claims are considered to be quite overbroad in their coverage resulting in lack of enablement problems. In addition, the only examples of heteroatoms present in the R_B group are oxygen and nitrogen, which chemically behave differently from sulfur and phosphorus, their congeners, sufficiently to make the synthesis of the nitrogen ligands vs. the phosphorus ligands, and the oxygen ligands vs. the sulfur ligands, so different that the reaction pathways between the first row vs. the second row main group element compounds are undoubtedly not simply substitution of the 3p element for the 2p element.

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7. Claims 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, in l. 7 the spelling should be corrected to --cyclopentadienyl--. In l. 5 the instances of "may be" should both be --are--; delete "each may be" at the end of the line. In l. 8 it is not clear what is meant by "imparts stereoridity to the rings"; the rings themselves are already stereorigid, so what is actually stereorigid, whatever that means? In the last two lines "a catalyst component" lacks antecedent basis. In l. 10-12 it is not clear that the numbers of the various groups work out to satisfy the 18 electron rule. Claim 19 has essentially the same problems as claim 13.

In claim 14 the identities of M and the heteroatom all appear to be overbroad as noted in paragraph 9 above.

In claim 16, delete "selected from among" and change "and" to --or-- for clearly closed Markush language. Claim 17 should be likewise amended.

In claim 18, l. 2, delete "selected from among", insert --a-- before "halides" and "substituted", make "halides" singular, change "and" to a comma, and in l. 3 make "hydrocarbyls" singular and insert --an-- before "unsubstituted" for clearly closed Markush language.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Tohi et al., WO 99/65951 (hereafter referred to as Tohi I).

Tohi I discloses the invention as claimed (p. 71, right column, third structure from the bottom; p. 75, right column, middle structure).

11. Claims 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Brookhart et al., Macromolecules, vol. 32, no. 7, pp. 2120-2130 (1999) (hereafter referred to as Brookhart).

Brookhart discloses the invention as claimed (p. 2120, right column, figure 1; p. 2121, right column, top paragraph; p. 2128, right column, "Synthesis of Complexes 4-9" and "Polymerization Procedure").

12. Claims 13-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Gibson et al., J. Am. Chem. Soc., vol. 121, no. 38, pp. 8728-8740 (1999) (hereafter referred to as Gibson).

Gibson discloses the invention as claimed (experimental procedures at the end of the paper).

13. Claims 13-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tohi I and Tohi et al., WO 99/65952 (hereafter referred to as Tohi II).

Tohi I discloses the invention substantially as claimed.

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Tohi I further discloses structures that read upon those of the present claims but lacking a clear disclosure of a bond between the heteroatom of the bridge and the metal atom (p. 46, right column, middle structure; p. 59, right column, third structure from the bottom; p. 61, right column, third structure from the bottom; p. 63, right column, third structure from the bottom; p. 65, right column, third structure from the bottom; p. 67, right column, third structure from the bottom).

Tohi II has a similar disclosure (p. 55, right column, third structure from the bottom; p. 50, right column, third structure from the bottom; p. 48, right column, third structure from the bottom).

None of these structures of Tohi I or II clearly discloses that the heteroatom of the bridge bonds to the transition metal.

However, given that the metal atom is electron deficient and thus a Lewis acid, and that the heteroatoms are all Lewis bases having available a lone pair of electrons to bond to the metal atom, it is quite likely that there in fact is a bonding interaction between these two atoms.


Since the prior art appears to describe and teach the present invention on the basis of inherent property characteristics which either anticipate or render obvious the claimed invention, an alternative 102/103 rejection is deemed appropriate, and the burden of proof that it does or does not shift to applicants as in *In re Best*, 195 USPQ 430, 433 (CCPA 1977).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 8:30 to 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell, can be reached at 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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AU 1755

6/15/04